

MADERA COUNTY

ASSISTANT ENGINEER

DEFINITION

Under direction, to conduct field inspections on a variety of bridge and road construction projects; to make field inspections of location, drainage, and final construction of private approaches and water and sewer systems within the County right-of-way; to ensure that construction work is completed in conformance with applicable standards, specifications, and laws; to answer questions concerning construction requirements and regulations; to perform complex office and field technical engineering support assignments; to perform flood control planning and other functions in support of the assigned department; and to do related work as required.

SUPERVISION EXERCISED

May exercise technical and functional supervision over lower level staff.

EXAMPLES OF IMPORTANT AND ESSENTIAL DUTIES

Reviews plans and specifications for a variety of construction projects, ensuring compliance with requisite construction standards and ordinances; visits project sites to anticipate and resolve potential problems; studies project files to become familiar with a variety of project information and data; participates in pre-work meetings with contractors, Caltrans personnel, and other parties to establish progress schedules and discuss construction methods; reviews a wide range of project requirements with concerned parties; coordinates and informs others of project features, such as road closures, detours, and traffic delays required by project activities; makes field inspections to gather materials samples and verify work progress; maintains contract diaries, approving payments and change orders; enforces safety, environmental, and labor requirements; interprets drawings and specifications to resolve differences on technical matters; prepares reports; responds to complaints related to construction activities; coordinates inspection assignments with other County departments and government agencies; inspects location, drainage, forms, and final construction of private roads within the County right-of-way; investigates and attempts to find solutions to water drainage problems; inspects final construction of water lines, electrical lines, telephone lines, and other utilities for compliance with County requirements; investigates public compliance with County requirements; investigates public complaints regarding road conditions and notifies appropriate personnel of problems; investigates violations of County ordinances regarding right-of-way; takes traffic counts and assists with resolving traffic flow problems within designated areas of the County; assists with the design of new bridges which meet the requirements of the State of California's bridge replacement program; prepares working plans for new bridges, calculating earthwork and construction material quantities needed; assists with the preparation of designs and draws plans for new road construction projects and improvements; assists with the review and evaluation of plans, specifications, and project proposals submitted by private engineering firms; prepares engineering drawings; makes general engineering calculations; works with the public and provides a variety of information about County regulations and policies; reviews parcel maps, subdivisions, combined development permits, use permits, variance permits, and related matters, and provides department recommendations; ensures compliance with all conditions of approval for development activity; reviews environmental impacts and recommended mitigation for land use activities; monitors the approved land use mitigation conditions pertaining to County roads; issues encroachment and construction permits; manages and coordinates the field inspection of parcel map, subdivision, and other land-use induced road improvements; represents the department on the Madera County Environmental, Parcel Maps and Subdivision Committee; coordinates

transportation planning with other County staff and public agencies; manages the Road Department data base for land use activities; manages the Mitigation Program for Madera County Roads; coordinates maintenance, repairs, and construction in special districts, with homeowners associations, contractors, staff, or consultants; prepares and checks boundary maps and legal descriptions; coordinates field inspections of special districts roads and issues encroachment and construction permits; performs flood control planning; oversees construction and maintenance of County landfill sites.

OTHER JOB RELATED DUTIES

Performs related duties and responsibilities as assigned.

JOB RELATED AND ESSENTIAL QUALIFICATIONS

Knowledge of:

Pertinent Federal, State, and local laws, codes, and regulations including those related to construction activities, grading activities, and County roads, bridges, rights-of-way, and water and sewer treatment facilities and distribution systems.
Basic principles and practices of civil engineering applicable to the planning, design, and construction of bridges and roads, flood control, or water and sewer system design and planning.
Principles and practices of land use and development.
Environmental review and construction permit principles, procedures, and documents.
Strength, properties, and uses of construction materials.
Appropriate work standards and specifications for construction work.
Methods, materials, tools, and equipment used in a variety of construction work for bridges, roads, water and sewer systems, and other facilities.
Proper inspection techniques and procedures.
Engineering mathematics.

Skill to:

Operate modern office equipment including computer equipment.
Operate a motor vehicle safely.

Ability to:

Interpret, apply, and explain the policies, procedures, laws, codes, and regulations pertaining to assigned programs and functions including those related to bridge, road, and water and sewer system construction and right-of-way access.
Apply technical knowledge of construction work.
Use sound inspection techniques to examine workmanship and to detect deviations from plans, and standard construction practices.
Read and interpret plans, diagrams, specifications, survey stakes and notes.
Perform a variety of technical engineering work.
Make arithmetical calculations quickly and accurately.
Keep accurate inspection records.

Ability to:

Prepare a variety of reports.

Explain construction regulations and requirements to contractors, developers, and the general public.

Communicate clearly and concisely, both orally and in writing.

Establish, maintain, and foster positive and harmonious working relationships with those contacted in the course of work.

Experience and Training Guidelines:

Any combination equivalent to experience and training that would provide the required knowledge, skills, and abilities would be qualifying. A typical way to obtain the knowledge, skills, and abilities would be:

Experience:

Three years of responsible work experience in construction inspection, preferably including experience as a bridge, road, or water and sewer system construction inspector or experience performing highly technical engineering support work.

Training:

Equivalent to a Bachelor's degree from an accredited college or university with major course work in civil engineering or a related field.

License or Certificate:

Possession of, or ability to obtain, an appropriate, valid driver's license.

Special Requirements:

Essential duties require the following physical skills and work environment:

Ability to sit, stand, walk, kneel, crouch, stoop, squat, twist, climb, and lift 30 lbs.; exposure to cold, heat, noise, outdoors, vibration, confining work space, chemicals, explosive materials, mechanical hazards, and electrical hazards; ability to travel to different sites and locations.

Effective Date: May, 1995